

FIGURE 271e-11 Rest myocardial perfusion and metabolism positron emission tomography (PET) scan obtained with ^{13}N -ammonia (perfusion) and ^{18}F -fluorodeoxyglucose (FDG; glucose metabolism) in a 48-year-old male with a prior myocardial infarction. The rest perfusion images show a large defect involving the apex, apical segments, and mid-anteroseptal and anterior segments (*arrowheads*), which has associated increase in glucose uptake (perfusion-metabolic mismatch), reflecting viable but hibernating myocardium throughout the left anterior descending coronary territory.

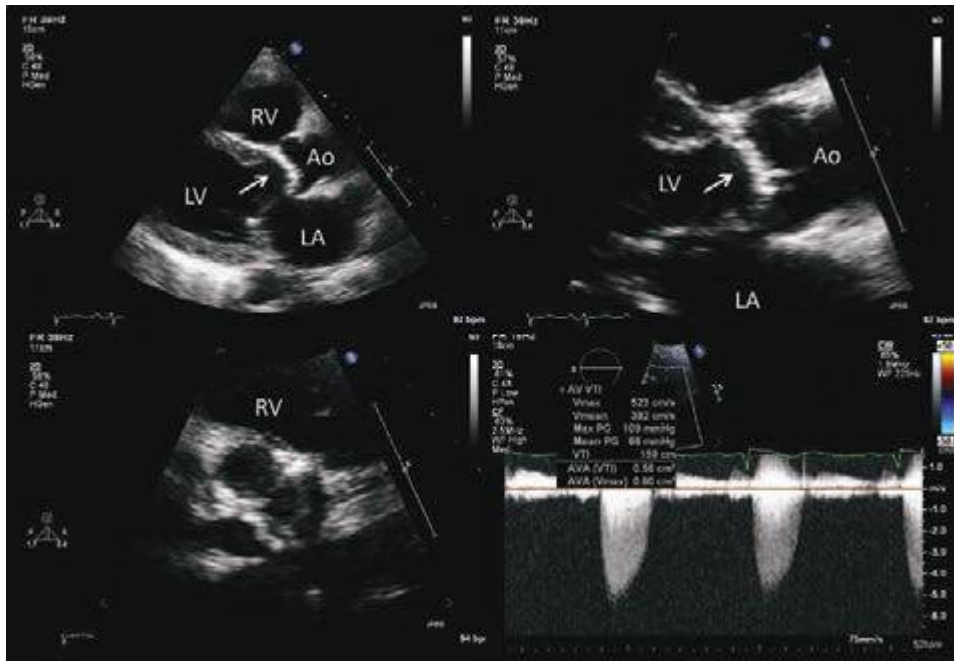


FIGURE 271e-12 A 70-year-old patient with known cardiac murmur and progressive shortness of breath and a recent episode of syncope. Echocardiography shows severe calcific aortic stenosis. A heavily calcified aortic valve (*arrow*) is shown in the parasternal long-axis views (*top panels*) and short-axis view (*bottom left*). Doppler interrogation shows a peak transaortic velocity of 5.2 m/s consistent with a peak instantaneous gradient of 109 mmHg and a mean gradient of 66 mmHg, and a corresponding aortic valve area of $<0.6\text{ cm}^2$ (*lower right*). Ao, aorta; LA, left atrium; LV, left ventricle; RV, right ventricle. (See Videos 271e-8, 271e-9, and 271e-10.)